

We Claim:

1. A method for remediating manure-contaminated material which comprises:

- 5           a. providing a mass of manure-contaminated material including in situ-formed bacteria and nitrogen-containing materials;
- b. acidifying said mass of manure-contaminated material to a pH of not more than about 7.0 without destroying a substantial portion of said active bacteria and/or without liberating a substantial portion of said nitrogen-containing materials;
- 10           c. particularizing said acidified manure-contaminated material; and
- d. treating said particularized, acidified manure-contaminated material with at least one chemical amendment to form a treated particularized manure-contaminated material.
- 15           2. The method of claim 1, wherein acidifying of said mass of manure-contaminated material comprises neutralization.
3. The method of claim 1, wherein the mass of manure-contaminated material is acidified with sulfuric acid and/or phosphoric acid and/or citric acid.
4. The method of claim 1, wherein the step of particularizing comprises
- 20           microfractionating the mass of manure-contaminated material.
5. The method of claim 1, wherein said chemical amendment comprises at least one nutrient.
6. The method of claim 1, wherein the treated particularized manure-contaminated material comprises a fertilizer.
- 25           7. The method of claim 1, wherein the acidified manure-contaminated material is entrained in an air stream during the particularizing step.
8. The method of claim 1, wherein the acidified manure-contaminated material is entrained in a vortex-type air stream which transports the entrained treated contaminated material in a generally circular path.
- 30           9. The method of claim 1, wherein the particularizing step comprises homogenizing and aerating the acidified manure-contaminated material.

10. The method of claim 1, wherein the step of particularizing the treated particularized manure-contaminated material increases the surface area of said mass of manure-contaminated material by a factor of at least about  $1 \times 10^6$ .

5           11. The method of claim 1, which further includes the step of discharging the microenfractionated treated contaminated material from the air stream and redistributing it throughout a soil matrix thereby substantially increasing the surface area of the soil matrix.

10           12. The method of claim 1, where the chemical amendment comprises a liquid solution.

13. A method for remediating manure-contaminated material which comprises:

15           d. providing a mass of manure-contaminated material including in situ-formed bacteria and nitrogen-containing materials;

            e. acidifying said mass of manure-contaminated material to a pH of not more than about 7.0 without destroying a substantial portion of said active bacteria and/or without liberating a substantial portion of said nitrogen-containing materials;

20           f. microenfractionating said acidified manure-contaminated material; and  
            d. treating said microenfractionated, acidified manure-contaminated material with at least one nutrient to form a treated microenfractionated manure-contaminated material.

14. The method of claim 13, wherein acidifying of said mass of manure-contaminated material comprises neutralization.

25           15. The method of claim 13, wherein the mass of manure-contaminated material is acidified with sulfuric acid and/or phosphoric acid and/or citric acid.

16. The method of claim 13, wherein the step of particularizing comprises microenfractionating the mass of manure-contaminated material.

30           17. The method of claim 13, wherein said chemical amendment comprises at least one nutrient.



18. The method of claim 13, wherein the treated particularized manure-contaminated material comprises a fertilizer.

19. The method of claim 13, wherein the acidified manure-contaminated material is entrained in an air stream during the particularizing step.

5        20. The method of claim 13, wherein the acidified manure-contaminated material is entrained in a vortex-type air stream which transports the entrained treated contaminated material in a generally circular path.

21. The method of claim 13, wherein the particularizing step comprises homogenizing and aerating the acidified manure-contaminated material.

10        22. The method of claim 13, wherein the step of particularizing the treated particularized manure-contaminated material increases the surface area of said mass of manure-contaminated material by a factor of at least about  $1 \times 10^6$ .

15        23. The method of claim 13, which further includes the step of discharging the microenfractionated treated contaminated material from the air stream and redistributing it throughout a soil matrix thereby substantially increasing the surface area of the soil matrix.

24. The method of claim 13, where the chemical amendment comprises a liquid solution.

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